

REMARKS

Claims 1-53 and 56-73 are pending in the Application. Claims 1-22, 36, and 45 have been amended. Claims 56-73 are newly added. Independent claims 1, 22, 36, and 45 have been amended to remove the language contained in the preamble of these claims that was objected to in the February 14, 2003 Office Action. Dependent claims 2-21 have also been amended in light of the amendment made to the preamble of claim 1. In addition, claims 1, 22, 36, and 45 have been amended to recite the feature that the array of unit cells is disposed on a chip adapted to receive a conductive solution including charged biological materials. Support for this claimed feature can be found, for example, on page 13, lines 7-22 of Applicants' specification. Finally, the specification has been amended to update the status of the priority applications/patents and related application information.

Claims 1-53 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the preamble contained in claim 1 (and elsewhere) was objected to by the Examiner. In response thereto, Applicants have amended independent claims 1, 22, 36, and 45 to remove the objected to language in the preamble.

Claim 26 was also rejected under § 112, second paragraph for its use of the phrase "is in a by." Applicants traverse this rejection. Claim 26 recites the feature that the shift register memory is in a "by one configuration. As seen, for example, on page 13 of the specification (beginning on line 7), the individual unit cells of the array are selected by one or more row selectors and one or more column selectors. In one preferred embodiment,

the selectors comprise shift registers either in a by one configuration or in a wider configuration, such as a by four configuration. Applicants submit that “in a by one” configuration, the shift register memory receives one bit and shifts one bit at a time. Applicants submit that the meaning of this claimed feature is clear and is in full compliance with § 112, second paragraph.

Claims 1, 5, 10-13, 15-17, 22, 23, 27, and 32-53 are rejected under § 102(b) and § 102(e)(2) as being anticipated by U.S. Patent No. 4,672,412 (Wei et al.). These same claims are also rejected under § 102(e)(2) as being anticipated by U.S. Patent No. 5,962,856 (Zhao et al.). Without conceding the propriety of the § 102 rejections, Applicants submit that the rejection of the above-identified claims is obviated in light of the amendments made to independent claims 1, 22, 36, and 45. Each of these claims has been amended to recite the feature that the array of unit cells is disposed on a chip that is adapted to receive a conductive solution including charged biological materials. Neither Wei et al. nor Zhao et al. disclose or otherwise suggest this feature.

Wei et al. discloses a Schottky diode infrared imaging array fabricated on a silicon substrate. Unit electrodes are formed in an array on a substrate. Each unit cell includes a photosensitive Schottky barrier metal electrode formed on a semiconductor substrate defining a Schottky junction therewith, as well as a row electrode and column electrode that are electrically insulated from the Schottky electrode and capacitively coupled thereto. The array of Wei et al. is used as an infrared imaging array and is not adapted to receive a conductive solution that includes charged biological materials.

Similarly, Zhao et al. discloses an active matrix imaging array that is used for radiography and fluoroscopy. The detector includes a large area, flat panel that fits into conventional x-ray room buck trays. The array includes a plurality of pixels, each pixel comprising a pixel electrode, storage capacitor, and a thin film transistor. There is no disclosure or suggestion in Zhao et al. of the active matrix imaging array being formed on a chip adapted to receive a conductive solution including charged biological materials. For these reasons, neither Wei et al. nor Zhao et al. anticipate the claimed system.

Applicants submit that the claims are allowable over the prior art of record. A notice of allowability is respectfully requested. Should Examiner have any questions concerning this Amendment and Response, please contact the undersigned attorney at (949) 737-2926.

Respectfully submitted,

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